

### **REMARKS**

The rejection of claims 1 to 33 as being obvious over Vosteen '358 (US Patent 6,878,358) in view of Sellakumar (US Patent 6,960,329) has been overcome in view of the amendment to independent claims 1 and 26. The amendment limits the halogen-containing additive to  $\text{NH}_4\text{Br}$  and  $\text{NH}_4\text{I}$ . Further, new claim 39 is similar to claim 1 but defines the halogen-containing additive as having  $\text{NH}_4\text{I}$ .

Independent claims 1 and 26 require the halogen-containing additive to include ammonium bromide and/or ammonium iodine. These claims are directed to a method for oxidizing elemental mercury using a halogen-containing additive, adsorbing the oxidized mercury and collecting the adsorbent with the oxidized mercury.

Vosteen '358 does not disclose or suggest using a halogen-containing additive including ammonium and teaches away from ammonium compounds by disclosing that bromine and sulfur is to be used to oxidize mercury. Specifically, Vosteen '358, col. 2, lns. 25-32 states:

**“The addition of bromine or bromine compounds to the furnace causes, under the given conditions of a high-temperature process or the like, in the presence of a sulphur [sic. sulfur] compound, in particular in the presence of sulphur [sic. sulfur] dioxide, a substantial, essentially complete, oxidation of the mercury and therefore allows substantial removal of the mercury from flue gases.”**

The use of bromine and sulfur is central to the method for oxidizing mercury disclosed in Vosteen '358. A person of ordinary skill reading Vosteen '358 would view ammonium

compounds as useful to adsorb mercury. The reference to "bromine compounds" is not by itself sufficient to teach "ammonia bromide" and there is nothing in Vosteen '358 that would have lead a person of ordinary skill to use ammonia bromide or ammonia iodine.

The claims have been amended so as to no longer refer to ammonium chloride. Sellakumar teaches the injection of a chloride-containing salt, such as ammonium chloride, to oxidize mercury in flue gas. No other halogen containing ammonium salts are disclosed by Sellakumar. Accordingly, Sellakumar no longer supports the rejection.

All claims are in good condition for allowance. If any small matter remains outstanding, the Examiner is requested to telephone applicants' attorney. Prompt reconsideration and allowance of this application is requested.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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